CLAIMS

What is claimed is:

1. A method of initializing a video system, said video system including at least a first and a second endpoint connected via a communications network; said method including:

   determining first endpoint parameters of said first endpoint;

   sending said first endpoint parameters along with an invite request message to said second endpoint;

   receiving said invite request message and first endpoint parameters at said second endpoint;

   determining second endpoint parameters of said second endpoint;
   sending an acknowledgement message along with said second parameters to said first endpoint; and

   initializing said first and second endpoints using the parameters of the other endpoint to select appropriate parameter values by referring to predefined common look-up tables and predefined rules at said first and second endpoints.

2. A method as in claim 1 wherein said communications network is a local area network, wide area network (WAN), satellite network, wireless communications network, value added network (VAN), telephone network (POTS), private leased line network or any combination of the foregoing

3. A method as in claim 2 wherein said communications network is the Internet.

4. A method as in claim 1 wherein each of said endpoints is a video enabled system.

5. A method as in claim 4 wherein each of said endpoints is a computer system.

6. A method as in claim 1 wherein said first and second endpoint parameters include performance characteristics parameters.

7. A method as in claim 6 wherein said performance characteristics parameters include first and second endpoint CPU speeds, first and second endpoint ordinal profiles, a set of predefined encoding formats appropriate for second endpoint decoding; a current frame size, a current frame rate, and a current encoder format.

8. A method as in claim 7 wherein said initialization step further comprises:

if said second endpoint cannot decode said current encoder format then assigning said current encoder format to an encoding format appropriate for second endpoint decoding based on said predefined rules;

otherwise, obtaining, using said current frame size, first, second and third cost factors of said first or second endpoints from said predefined common tables; wherein said first cost factor is the number of CPU clock cycles to encode a frame on said first endpoint; said second cost factor is the number of CPU clock cycles to decode a frame on said second endpoint; and said third cost factor is the number of CPU clock cycles to render a frame on said second endpoint;

if, based on said first cost factor, said first endpoint encoding does not consume more than about 60% of available CPU resources then

if, based on said second and third cost factors, said second endpoint decoding and rendering does not consume more than about 40% of available CPU resources then terminating said initialization step; otherwise

if said current frame size is has not been once reduced then reduce said current frame size by half;

otherwise if said current frame size is twice reduced then setting said current encoder format to an appropriate value based on said predefined rules;

otherwise reducing said current frame rate by about 75%.

9. A video initialization system, comprising:

a communications network;

at least a first and a second endpoint connected via said communications network;

said first endpoint configured to:

determine first endpoint parameters of said first endpoint;
send said first endpoint parameters along with an invite request message to said second endpoint;

said second endpoint configured to:

receive said invite request message and first endpoint parameters at said second endpoint;
determine second endpoint parameters of said second endpoint;
send an acknowledgement message along with said second parameters to said first endpoint; and

each of said first and second endpoints configured to:

initialize said respective first and second endpoints using the parameters of the other endpoint to select appropriate parameter values by referring to predefined common look-up tables and predefined rules at said respective first and second endpoint

10. A system as in claim 9 wherein said communications network is a local area network, wide area network (WAN), satellite network, wireless communications network, value added network (VAN), telephone network (POTS), private leased line network or any combination of the foregoing.

11. A system as in claim 9 wherein said communications network is the Internet.

12. A system as in claim 9 wherein each of said endpoints is a video enabled system;

13. A system as in claim 12 wherein each of said endpoints is a computer system.

14. A system as in claim 9 wherein said first and second endpoint parameters include performance characteristics parameters.

15. A system as in claim 14 wherein said performance characteristics parameters include first and second endpoint CPU speeds, first and second endpoint ordinal profiles, a set of predefined encoding formats appropriate for second endpoint decoding; a current frame size, a current frame rate, and a current encoder format.

16. A system as in claim 15 wherein during initialization said system is further configured to:

if said second endpoint cannot decode said current encoder format then assigning said current encoder format to an encoding format appropriate for second endpoint decoding based on said predefined rules;

otherwise, obtaining, using said current frame size, first, second and third cost factors of said first or second endpoints from said predefined common tables; wherein said first cost factor is the number of CPU clock cycles to encode a frame on said first endpoint; said second cost factor is the number of CPU clock cycles to decode a frame on said second endpoint; and said third cost factor is the number of CPU clock cycles to render a frame on said second endpoint;

if, based on said first cost factor, said first endpoint encoding does not consume more than about 60% of available CPU resources then

if, based on said second and third cost factors, said second endpoint decoding and rendering does not consume more than about 40% of available CPU resources then terminating said initialization step; otherwise

if said current frame size is has not been once reduced then reduce said current frame size by half;

otherwise if said current frame size is twice reduced then setting said current encoder format to an appropriate value based on said predefined rules;

otherwise reducing said current frame rate by about 75%.